

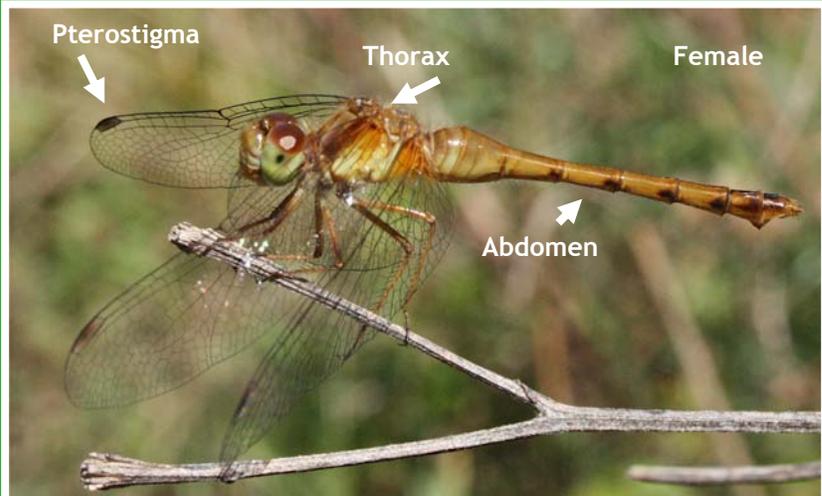
BC's Coast Region: Species & Ecosystems of Conservation Concern

Autumn Meadowhawk (*Sympetrum vicinum*)

Global: G5 Provincial: S3S4 COSEWIC: N/A BC List Blue



Mature male



Pterostigma

Thorax

Female

Abdomen

Notes on *Sympetrum vicinum*: A member of the family Libellulidae (“Skimmer” dragonflies), which along with its subfamilies and allies forms the largest dragonfly family in the world. Members within the genus *Sympetrum* are referred to as “Meadowhawks” or “Darters.” Autumn Meadowhawk was previously referred to as Yellow-legged Meadowhawk.

Description

Length: males 3.2–3.5 cm, females 2.6–3.4 cm. Males and females are dimorphic in colour (males are larger). Both sexes of this species lack much in the way of markings or patterning. In mature males, the face, eyes, thorax and abdomen are shades of red to reddish brown; legs are yellow to reddish-brown. In females the face is light brown with brown and green eyes. The thorax is yellow to grey, the legs yellowish, and the abdomen brown. Females have a prominent v-shaped ovipositor (structure used to place eggs). Immature individuals tend to be yellow or similar to females, taking on deeper colouration according to sex as they mature. The pterostigma (coloured, thickened cell on the leading edge of each wing membrane near the tip), is reddish-brown. In some regions (in the US), this species is known to change colour with cool weather, with the male’s red coloration shifting to orange, then brown with dropping temperatures. The 1.2-1.5 cm larvae (“nymphs”) are mottled green and brown in color with several large dorsal hooks along the abdomen. The last two abdominal segments have a single, large, rear-facing spine on each side.

Diet

Members of the Order Odonata (dragonflies and damselflies), are carnivorous. Adults capture prey (a range of insects from mosquitoes to moths as well as other dragonflies or damselflies), through hawking (flying back and forth over open areas), or perching (“salliers” who dart out from perch and grab prey or glean off nearby vegetation). Autumn Meadowhawk are perchers. Dragonfly larvae can prey on a range of organisms (e.g. small fish, amphibian larvae, other aquatic invertebrates - including their own species or those of other dragonflies or damselflies).

Look’s Like?

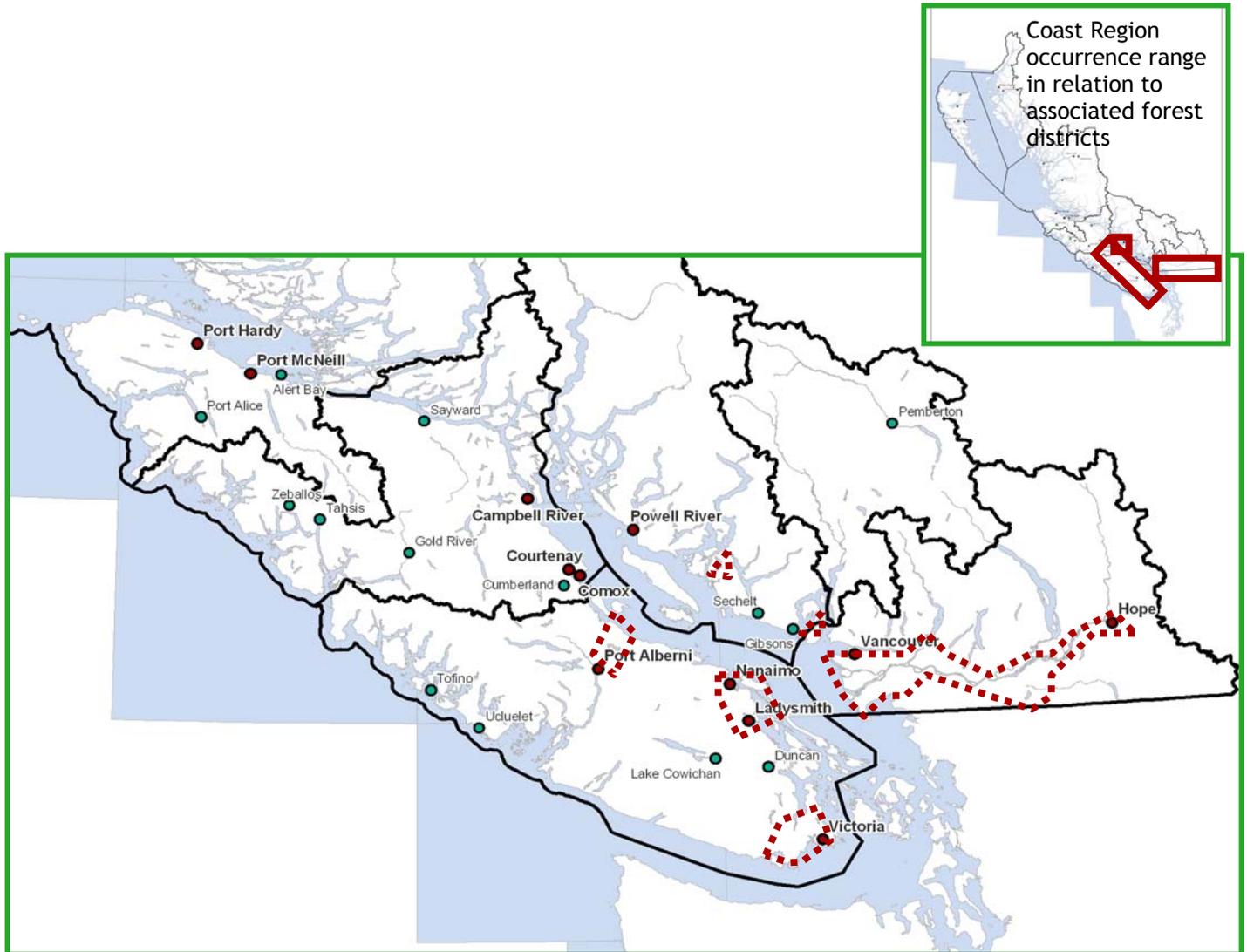
The genus *Sympetrum* is a large one, most of the species in BC are similarly coloured to Autumn Meadowhawk. Cardinal Meadowhawk and Red-veined Meadowhawk are two red species whose ranges overlap with Autumn Meadowhawk. Cardinal and Red-veined Meadowhawk have reddish-gold pigmentation that spreads from the wing base along the wing membranes of both sets of wings. This pigmentation is lacking in Autumn Meadowhawk. While Cardinal Meadowhawk has reddish brown legs, it has white marks on the side of the thorax. The Red-veined Meadowhawk also has white thorax markings and has black legs.



Cardinal Meadowhawk

Distribution

Found in lowland forested areas from northeast California through Oregon and Washington State and north into the Coast Region and north into the Coast Region (southern mainland coast and Vancouver Island) and some southern valleys of the Interior (Okanagan, Kootenay).. On the Coast Region occurrences have been documented on southeastern Vancouver Island from Greater Victoria to Campbell River and on the mainland from the Fraser Lowlands (Metro Vancouver to Hope), and north from Howe Sound (Bowen Island), to the Sunshine Coast (Egmont area).



Autumn Meadowhawk (*Sympetrum vicinum*), known areas of occurrence (based on historic and recent accounts), for the Coast Region.

Habitat Preferences Well vegetated, freshwater wetlands and aquatic habitats including bogs, ponds, lakes, and slow-moving streams, usually associated with forest cover. Roadside drainages, sloughs and stormwater detention ponds may also be used for breeding and foraging.

Critical Features Little is known about the connectivity requirements or dispersal range for this species.

This species is associated with a range of wetland habitats with adequate vegetative cover.

Seasonal Life Cycle



Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					Adult emergence, Breeding / Egg Deposition						

Larval development and maturation stages. Larvae (nymphs) have several “instars” (growth periods between each molt), prior to emergence as winged adults.

This species is one of the few in BC that flies into late fall. Adult flight period in BC has been documented from mid-June, peaking in August and September and lasting until late October. Washington State populations have been documented to fly as late as early December. *Timing of adult emergence, egg deposition and period for larval maturation may vary throughout this species range.

Threats

- The preferred habitat associations of this species are subject to changes in hydrological regimes, dewatering and reduction in structural complexity from various land use activities (e.g. dredging, dyking, impoundments and infilling).
- Suppression of natural or historic maintenance regimes (e.g. fire, flooding), along with potential changes from climate change, may increase loss of wetland habitats from succession to shrub thicket and forest.
- Encroachment from development (especially lakeshore areas and associated recreational activities), agricultural land uses (livestock access to breeding ponds and wetlands), can impact adult breeding success and larval viability.
- Impacts to water quality and aquatic habitats from contaminated stormwater runoff (urban development), road building and sedimentation (resource extraction activities) and broadcast spraying for insect pests or for noxious weed control (urban/rural land uses, utility corridor maintenance), may have significant impacts to invertebrate species at all life history stages.
- Spread and colonization of invasive plant species (aquatic and terrestrial) can impact structural diversity and hydrology of breeding habitats and availability and access to prey items.
- Introduction or enhancement of native or invasive fish species increases predation pressure on local Odonata populations (i.e. larval stages) and can impact aquatic habitat values (e.g. emergent vegetation used for cover).

Conservation & Management Objectives

- Apply conservation and management objectives for this species as identified in resources such as the Royal BC Museum’s “Living Landscapes - Insects and Their Relatives (the Odonata Investigate recommendations for conservation for other Odonata species in BC (e.g. those found in provincial or federal status reports for species such as Western River Cruiser or Olive Clubtail).
- Inventory and assessment methods should follow those set out in the RISC Standards #40 “Inventory Methods for Terrestrial Arthropods.” More recent survey and assessment guidelines and recommendations as well as identification and inventory resources for Odonata and their habitat have been developed and should be investigated¹.

¹ Contact the provincial invertebrate specialist or the Royal BC Museum. A number of survey and assessment protocols have been developed for Odonata management outside of Canada and are listed at the end of this factsheet. Others like the Wetlandkeepers Handbook and the Wetland Evaluation Guide adopted by the BC Provincial Wetland Working Group focus on habitat associations.

Specific activities should include:

- Conduct outreach to raise awareness of this species and how to identify it to improve distribution knowledge. A targeted inventory is needed to determine if undiscovered populations exist elsewhere within the Coast Region.
- Improve understanding of larval lifecycle requirements and vulnerabilities.
- Where suitable habitat occurs, work with land managers and land owners to ensure development or recreational activities do not impact local populations.
- Encourage landowners and land use authorities to dedicate conservation covenants and easements to protect and buffer sensitive aquatic habitats. Increase awareness about the role and value that wetlands play locally and internationally.
- Effective long-term control and reduction in competition from invasive or aggressively spreading vascular plants (e.g. invasive aquatic plants, terrestrial shrubs and grasses), must form part of strategies to protect and recover populations. Disturbance to native rare plant species and communities must be minimized during control activities.
- Work to reduce the need for broadcast and cosmetic pesticide use that may be impacting non-target species through instituting integrated pest management programs.
- Consider restoration of historic maintenance regimes (e.g. seasonal flooding in lowland wetlands and floodplain off-channel areas, where feasible), that may have sustained wetland communities and species associations.
- Implement integrated stormwater planning and management approaches that reduce and eliminate potential sources for contaminated non-point source runoff entering local wetlands and waterways.

Habitat for this species may be subject to protections and prohibitions under the BC Wildlife Act and may also be governed under provincial and federal regulations including the Fish Protection Act and Federal Fisheries Act as well as Regional and local municipal bylaws.

Content for this Factsheet has been derived from the following sources

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Prepared by: Pamela Zevit of Adamah Consultants with Patrick Lilley Raincoast Applied Ecology for the South Coast Conservation Program (SCCP) in partnership with: International Forest Products (Interfor), Capacity Forestry (CapFor) and the BC Ministry of Environment (BC MoE), E-Flora and E-Fauna the Electronic Atlas of the Flora and Fauna of BC, Species at Risk & Local Government: A Primer for BC. Funding for this factsheet was made possible through the Sustainable Forestry Initiative (SFI): <http://www.sfiprogram.org/>

Every effort has been made to ensure content accuracy. Comments or corrections should be directed to the South Coast Conservation Program: info@sccp.ca. Content updated March 2011.

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